WHAT IS CLAIMED IS:

1. A depolymerizing process of polylactic acid, wherein the polylactic acid is depolymerized in the presence of a hydrolase in an organic solvent, thereby producing a re-polymerizable oligomer.

2. A depolymerizing process of polylactic acid, wherein the polylactic acid is depolymerized in the presence of a hydrolase in a supercritical fluid, thereby producing a re-polymerizable oligomer.

3. The depolymerizing process of polylactic acid according to Claim 1, wherein the polylactic acid is poly(L-lactic acid).

4. The depolymerizing process of polylactic acid according to Claim 2, wherein the polylactic acid is poly(L-lactic acid).

5. The depolymerizing process of polylactic acid according to Claim 1, wherein the polylactic acid is poly(DL-lactic acid).

6. The depolymerizing process of polylactic acid according to Claim 2, wherein the polylactic acid is poly(DL-lactic acid).

7. The depolymerizing process of polylactic acid according to Claim 1, wherein the polylactic acid is a polylactic acid copolymer.

8. The depolymerizing process of polylactic acid according to Claim 2, wherein the polylactic acid is a polylactic acid copolymer.

9. The depolymerizing process of polylactic acid according to Claim 1, wherein the hydrolase is lipase.

10. The depolymerizing process of polylactic acid according to Claim 2, wherein the hydrolase is lipase.

11. A producing process of polylactic acid, wherein the re-polymerizable oligomer obtained by the depolymerization process according to Claim 1 is polymerized in the presence of a hydrolase.

12. A producing process of polylactic acid, wherein the re-polymerizable oligomer obtained by the depolymerization process according to Claim 2 is polymerized in the presence of a hydrolase.

13. The producing process of polylactic acid according to Claim 11, wherein the hydrolase is lipase.

14. The producing process of polylactic acid according to Claim 12, wherein the hydrolase is lipase.

15. The producing process of polylactic acid according to Claim 11, wherein one or more monomers or oligomers selected from cyclic lactone

monomers or oligomers, cyclic or linear carbonate monomers or oligomers, cyclic or linear ester oligomers, hydroxy acids, or hydroxy acid esters are used as comonomers.

16. The producing process of polylactic acid according to Claim 12, wherein one or more monomers or oligomers selected from cyclic lactone monomers or oligomers, cyclic or linear carbonate monomers or oligomers, cyclic or linear ester oligomers, hydroxy acids, or hydroxy acid esters are used as comonomers.

17. A producing process of polylactic acid, wherein the re-polymerizable oligomer obtained by the depolymerization process according to Claim 1 is polymerized in the presence of a polymerization catalyst.

18. A producing process of polylactic acid, wherein the re-polymerizable oligomer obtained by the depolymerization process according to Claim 2 is polymerized in the presence of a polymerization catalyst.

19. The producing process of polylactic acid according to Claim 17, wherein one or more monomers or oligomers selected from cyclic lactone monomers or oligomers, or cyclic carbonate monomers or oligomers are used as comonomers.

20. The producing process of polylactic acid according to Claim 18, wherein one or more monomers or oligomers selected from cyclic lactone monomers or oligomers, or cyclic carbonate monomers or oligomers are used as comonomers.